

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

SF 601
25

FOREIGN ANIMAL
DISEASES REPORT



SEPTEMBER -
OCTOBER 1975

U.S. DEPT. OF AGRICULTURE
NATIONAL LIBRARY
NOV 11 1975
CURRENT SERIALS SECTION

UNITED STATES ENCEPHALITIS - 1975

There have been numerous reports of encephalitis throughout the United States in the summer and early fall of 1975. The most prevalent etiological agents are St. Louis (SLE), Western Equine (WEE), and Eastern Equine Encephalitis (EEE). Generally speaking, they follow a bird-mosquito cycle with an occasional spill over to mammalian hosts. SLE appears in humans and WEE/EEE appear in both humans and horses. Climatic conditions have been optimum for the vector and reservoir (bird) to produce encephalitis epidemics in the Mississippi and Red River areas. The following summarizes the encephalitis situation as gathered from reports from the Center for Disease Control (CDC), Atlanta, Georgia, the various states, USDA, APHIS, and mass media reports. Table 1 shows the distribution of SLE cases by state through September 20, 1975, as reported by Morbidity and Mortality reports.

Certain factors determined by surveillance indicate there have been bizarre events related to these outbreaks, especially with SLE. There have been several suspect cases of SLE in the Washington, D.C., metropolitan area. Authorities have mounted local mosquito abatement programs to prevent public concern and prevent transmission of possible SLE infection. They include an epidemic in the Chicago, Illinois area and Ohio where SLE has not been previously reported, and in the state of New Jersey.

As reported in the last FAD Report, the Red River Valley states of Minnesota, North Dakota, and South Dakota experienced flooding conditions which resulted in an outbreak of WEE in July and August. There have been 14 serologically confirmed or suspect cases with six deaths in humans and much greater numbers of horse cases. There were two aerial applications of ultra-low-volume malathion in populated areas in 12 North Dakota and eight Minnesota counties. Control measures and weather have brought the Red River Valley epidemic under control.

There have been numerous reports of EEE and WEE throughout the United States since the onset of the mosquito season this year. Table 2 indicates the distribution of equine cases of encephalitis by state for 1975.

One pool of 21 mosquito pools collected in California was positive for WEE. Over 1.9 million doses of equine encephalitis vaccine have been produced through July 1975 in the United States. Table 2 shows 10,107 reported VEE vaccinations by state in 1975 in the United States.

Venezuelan Equine Encephalitis Chronology: Venezuelan Equine Encephalitis (VEE) appeared in the United States in 1971. Control measures included the aerial

spraying for the control of mosquitoes of over 13 million acres in Texas and Louisiana. Over 2 million horses were vaccinated with, then, experimental vaccines. The cost of the eradication program went above \$19 million. A chronological review of VEE seems in order, because of the arbovirus epidemics that have occurred in the United States. An article by Ian B. Robertson of the Department of Agriculture for Northern Ireland, Belfast appeared in the State Veterinary Journal, Vol. 30, No. 89, May 1975, under the title "Venezuelan Equine Encephalomyelitis."

The summary of the article indicates that VEE first appeared in the Venezuela-Colombia area in the middle 1930's. It then began its spread to Trinidad, Peru, Brazil, Surinam, Panama, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Costa Rica, Mexico, and the United States. A subtype of VEE has existed in the Mahogany hammock area of southern Florida for at least 12 years.

Table 1: States with confirmed or seropositive cases of SLE virus infection, September 23, 1975.

State	<u>Cases</u>		Total
	Confirmed	Some Serologic Evidence	
Alabama	13	20	33
Arkansas	3	10	13
Colorado	1	0	1
Georgia	2	0	2
Illinois	128	202	330
Indiana	43	12	55
Iowa	5	10	15
Kentucky	19	11	30
Louisiana	2	5	7
Maryland	4	0	4
Mississippi	80	74	154
Missouri	4	6	10
Nebraska	1	0	1
New Jersey	14	0	14
North Dakota	10	0	10
Ohio	24	24	48
Pennsylvania	3	1	4
Tennessee	18	22	40
Texas	14	28	42
West Virginia	0	2	2
Total	388	427	815

The vertebrate host range includes, equidae, man, and rodents. Clinical differentiation of EEE, WEE, and VEE in equidae is impossible. Sophisticated laboratory procedures are essential for a differential diagnosis. The range of tests include hemagglutination inhibition, serum neutralization, and complement fixation tests on serum samples; tissue culture and laboratory animal inoculation for virus isolation and stain identification of the three "equine" varieties of the virus.

Table 2: Equine Encephalitis Investigations and VEE Vaccinations in the United States, January-September 20, 1975.

State	Investigations	Positive Diagnosis		Vaccinations
		WEE	EEE	
Alabama	16		9	30
Arizona				82
Arkansas	13	1	4	90
California				2,719
Colorado	169	147		
Connecticut				5
Florida	3			324
Georgia	1			465
Hawaii	1			
Idaho	19	9		
Illinois	51	16		3
Indiana	30		2	56
Iowa	64	52		
Kansas	30	26		44
Kentucky	7			87
Louisiana	2			111
Maine				439
Michigan	3		2	20
Minnesota	163	141		58
Mississippi	17	1	7	7
Montana	2	1		
Nebraska	59	56		6
Nevada	1			205
New Hampshire	1			
New Mexico	2	1		839
New York	1			
North Carolina	15		8	6
North Dakota	61	49		
Ohio	1			
Oklahoma	38	26		294
Oregon	11	3		358
Pennsylvania				148
South Carolina	32		16	142
South Dakota	54	51		2
Tennessee	9			279
Texas	11	4		3,122
Utah	7	6		
Vermont	1			
Virginia	2		1	
Washington	3	1		81
Wisconsin	2			85
Wyoming	18	15		
Puerto Rico	1			
TOTAL	921	606	49	10,107

The epidemiology of the equine arboviruses is not fully understood. The question of where the virus remains between epidemics is not fully explained. Some investigators have hypothesized the virus remains in lower vertebrate hosts such as birds and rodents. Others feel the virus mutates in some manner between epidemics. The virus may remain in the long living vectors from year to year or it may become inactive for periods of time in certain hosts and then reactivate through some method. These theories and many other questions about the viruses need to be investigated before their epidemiology is complete.

EQUINE ENCEPHALITIS IN CUBA*

An encephalitis affecting equines in Cuba became apparent in the early twentieth century. Outbreaks occurred in 1914-1915, 1928-1929, 1934, and 1945. EEE was identified in the 1945 outbreak.

Significant equine mortality from EEE occurred in 1953, 1969, 1970, 1971-1972. Since that time and through the first 7 months of 1974, there were no reported cases of EEE in Cuba. Table 1 shows the distribution of equine encephalitis outbreaks in Cuba through part of 1974.

Cuba began production of EEE vaccine in 1967. With the increased use of the vaccine, EEE has virtually disappeared from the country.

(*Abstracted from Vigilancia Epidemiologica: Encephalitis Surveillance for the Americas, Pan American Zoonoses Center, Ramos Mejia, Buenos Aires, Argentina, Vol. 4, No. 1, 1975, pp. 1-2).

Table 1-Epizootics of equine encephalitis in the Republic of Cuba, 1914-1972.

Year(s)	Province(s)	Estimated No. of dead equines
1914-1915	Las Villas	500
1928-1929	Pinar del Rio	31
1934	Oriente	11
1944-1945	Camaguey	735
1953	Oriente (principally)	several thousands
1969	La Habana, Matanzas, Pinar del Rio, Isle of Pines	195
1970	Camaguey	290
1971	Oriente	17
1972	Las Villas	19

FOOT-AND-MOUTH DISEASE - RECENT EVENTS

Malta - An outbreak of Foot-and-Mouth (FMD) disease in Malta was detected in late spring of 1975. A limited slaughter policy of infected herds plus a massive vaccination campaign and strict quarantine measures have resulted in the control of the outbreak.

At least 252 cattle, 1,200 swine, and 130 sheep and goats on 20 premises have been destroyed. The last reported case in cattle and swine was June 25, 1975. The last case in sheep was reported July 3, 1975.

International cooperative efforts in this outbreak included 13 veterinarians and scientists from the United Kingdom, and one U.S. Peace Corps Veterinarian. Most of these personnel have since departed Malta.

Strict control measures and a program to vaccinate all remaining animals in the country for the second time are planned for continued control of FMD.

Philippines - The Philippine Island of Luzon has had Type O₁ FMD endemically for some time. Recently, an outbreak from FMD type A24 was reported first on Mactan Island. Through the last of August, this was the most southern point FMD had occurred. The disease has been reported to be widespread in central and southern Luzon as well as oriental Mindoro and Sedu.

Recurrence of FMD on Luzon appeared to be unusually intense and in part may be attributed to the lack of a vaccination program in 1974. Control measures are confined to a massive vaccination effort on the affected islands.

Italy - A brief report of FMD in Italy appeared in the August 15, 1975, issue of the Market and Livestock Commission Economic Information Service Weekly European Market Survey. "There have been three outbreaks of foot-and-mouth disease recently in Italy, affecting 1,850 animals in the Ravenna area. All the pigs in the infected piggeries are to be slaughtered, and all the other pigs in the area vaccinated. Immediate vaccination of all cattle in the area is also taking place. The outbreak is reported to have been caused by the virus "O₁", which is particularly virulent for pigs. The last outbreak of foot-and-mouth disease was in 1972."

USDA CHANGES BIRD IMPORT RULES

Effective August 12, 1975, the U.S. Department of Agriculture (USDA) amended the federal regulations to clarify procedures for importing zoological, research, and performing birds.

The amended animal import rules include new definitions, clarify some conditions for bird imports, authority for zoological birds to be quarantined at USDA-operated import centers, an extension of the time period for which bird import permits will remain valid.

The new definitions cover zoological birds, zoological parks, research birds, and performing or theatrical birds. The definitions previously included only poultry, pigeons, commercial birds, and pet birds, and made no distinctions among other imported birds.

The new definitions were necessary in order to clarify the conditions under which these special categories of birds would be permitted entry into the United States. Imports of such birds had been permitted in the past under a general provision of the federal code that covered special cases; however, such imports now need to be more precisely defined.

Authority for zoos to import small numbers of zoological birds, by prior arrangement, through approved USDA quarantine stations provides an alternative to importation of these birds through commercially operated quarantine stations, which usually handle large numbers of birds.

The time period in which bird import permits will remain valid is extended 14 to 30 days for commercial birds, zoological birds and research birds; and to 90 days for theatrical or performing birds. Importers in the past have experienced some difficulty in arranging for bird shipments within the authorized 14-day period.

USDA RECOGNIZES PUREBRED MAINE-ANJOU CATTLE FOR DUTY FREE IMPORT FROM CANADA

On September 8, 1975, the U.S. Department of Agriculture officially recognized purebred Maine-Anjou cattle registered in Canada as qualifying for duty free import into the United States.

Recognition of the breed by USDA permits pedigreed animals to be granted free entry if accompanied by certificates of pure breeding. The action was taken after examining the microfilm book of record and rules for registration of Maine-Anjou cattle that are maintained by the Canadian Live Stock Records, Ottawa, Canada.

USDA already recognizes 13 other breeds of cattle registered in the Canadian Live Stock Records: Aberdeen Angus, Ayrshire, Brown Swiss, Canadian, Dexter, Galloway, Guernsey, Hereford, Highland, Jersey, Lincoln Red, Red Poll, and Short-horn. USDA has also recognized Charolais cattle registered with the Canadian Charolais Association of Calgary, Alberta; and Holstein-Friesian cattle registered with the Holstein-Friesian Association of Canada, Brantford, Ontario.

SHEEP AND GOATS EXPOSED TO SCRAPIE BANNED FROM SALVAGE

Sheep and goats that have been exposed to scrapie can no longer be slaughtered for human and animal food. The action was taken as a precautionary measure by USDA, pending further research on whether this disease can be transmitted naturally to other animals or man.

Laboratory observations disclosed that scrapie can be experimentally transmitted to five species of monkeys previously not known to be susceptible to the disease.

Scrapie is a virus disease occurring naturally in sheep and goats, causing progressive degeneration of the animal's central nervous system. It can be transmitted from one animal to another with an incubations period up to 42 months, or even longer, before symptoms appear.

The disease was first discovered in the United States in 1947, and 207 flocks in some 31 states subsequently have been found infected. An eradication program was initiated by state and federal animal health officials in 1952, resulting in a gradual decrease in the number of cases from a high of 22 in 1956, to only two infected flocks so far this year, one each in Illinois and West Virginia.

The following regulations became effective September 3, 1975: Sheep and goats exposed to scrapie or directly related by bloodlines to infected animals may no longer be quarantined or maintained under surveillance; rather, they must be destroyed in such a manner as to prevent the meat from being used for human and animal food; such animals will be appraised and owners indemnified for their losses up to the new rate of \$40 per head for grade animals and \$90 per head for purebred animals. Until recently, owners could recover some of their losses by sending exposed animals to slaughter and receive indemnities up to \$25 for grade animals and \$75 for purebred animals.

USDA ADDS CHICAGO, ILLINOIS, DROPS PORTLAND, OREGON AS LIVESTOCK EXPORT TERMINALS

The Chicago, Illinois, O'Hare Airport was added to the list of approved livestock export terminals and Portland, Oregon, was dropped as an approved airport and ocean port terminal for livestock shipments effective September 3, 1975.

The export inspection facilities at the Chicago airport complied with USDA standards for handling and examining livestock. Portland, on the other hand, was deleted after the animal export facility was closed on July 1. All animals passing through export terminals must be examined by APHIS veterinarians to assure that they are free of communicable diseases and they meet the health requirements of the receiving nation.

APHIS standards require proper lighting and restraining devices for veterinary examinations; paved, skid-resistant floors for pens and chutes; safe gates and fences; adequate space for handling each shipment; separation of different lots of livestock; and provisions for feed, water, and shelter.

In addition to Chicago, other airports approved for handling general livestock exports are: Harrisburg, PA; Helena, MT; Richmond, VA; Miami, Tampa, and St. Petersburg, FL; New Iberia, LA; Brownsville and Houston, TX; San Francisco, CA; Moses Lake, WA; and Honolulu, HA.

The ocean ports approved by APHIS are: Richmond, VA; Miami and Tampa, FL; Brownsville and Houston, TX; San Francisco, CA; and Honolulu, HA.

San Juan, PR, and New York are approved for horse export only due to limited facilities.

WORLD DISEASE REPORTS*

Country	Date 1975	New Outbreaks	Country	Date 1975	New Outbreaks
<u>Foot-and-Mouth Disease</u>					
Argentina	April 16-May 15	17	Paraguay	May 3-16	1
Bolivia	Jan. 1-15	2**		May 31-Aug. 8	28
Brazil	March 22-July 11	1614	Peru	June 1-30	12
Colombia	May 1-30	20	Rhodesia	June 1-30	1
Ecuador	May 16-June 15	21**	Thailand	Jan. 1-31	5
India	Feb. 1-March 31	297	Turkey	June 1-July 15	64
Iran	July 1-31	9	U.S.S.R.	May 1-June 30	14
Iraq	July 1-Aug. 15	33	Uruguay	June 14-20	6
Jordan	March 1-31	49**		June 28-July 4	5
Lebanon	June 1-30	7	Venezuela	April 1-30	1
<u>Rinderpest</u>					
India	Feb. 1-March 31	28			
<u>Contagious Bovine Pleuropneumonia</u>					
Angola	May 1-31	1	Niger	March 1-April 30	2
Cameroon	Aug. 6, 1975	1	Nigeria	August 21	1
Chad	April 1-June 30	4	South		
Ghana	May 1-June 30	9	Africa	June 1-30	1
<u>Sheep Pox</u>					
Greece	May 1-31	1	Israel	Feb. 1-March 31	10
India	Feb. 1-March 31	20	Lebanon	June 1-30	1
Iran	July 1-31	11	Tunisia	June 1-30	1
Iraq	July 1-Aug. 15	65**	Turkey	April 1-May 31	214
<u>African Swine Fever</u>					
Portugal	June 1-July 31	27	South		
			Africa	June 1-30	1
<u>Teschen Disease</u>					
Austria	June 16-30	1			
<u>Swine Vesicular Disease</u>					
Austria	July 1-15	1	United		
Germany	August 11	1	Kingdom	June 16-July 15	2
Italy	July 16-31	2			

(*Extracted from International Office of Epizootics Monthly Circular #344)
 (**Cases)